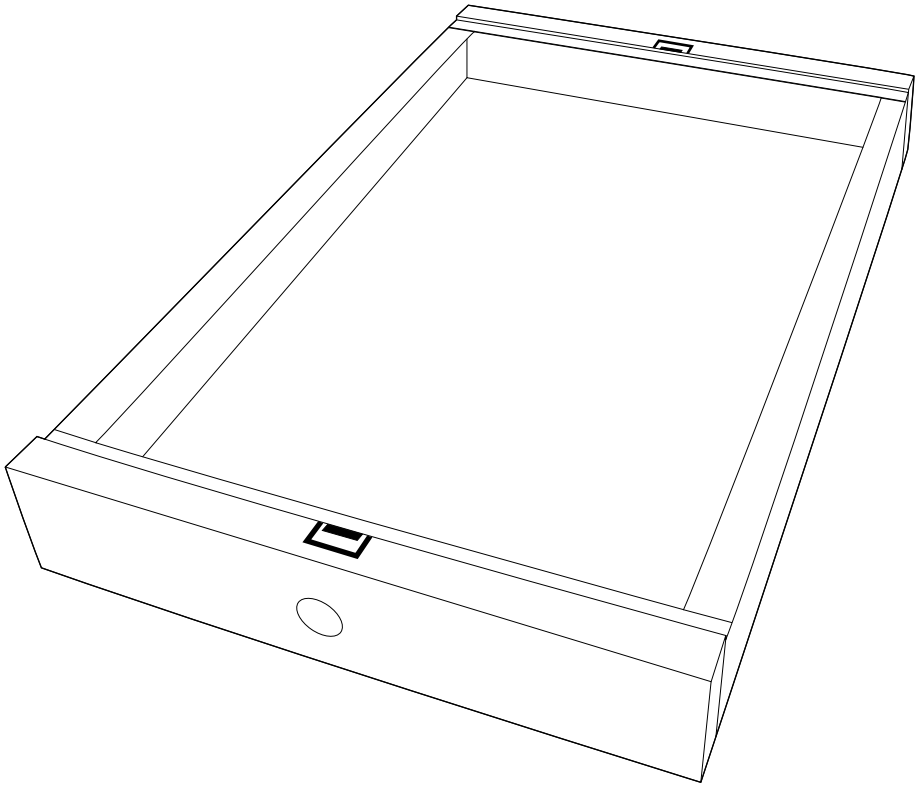
Installation Guide

BackboxFS

V1.3 April 2011



TECHNOLOGIES Ltd

Caution: Read before installing this product

- To ensure correct installation, please read this guide carefully and keep in a safe place for future reference.
- Install this product in a cool, dry, clean place - away from direct sunlight and heat sources, vibration, chemical fumes, dust and moisture (steam).
- Do not clean this product with chemical solvents as this may cause damage to the finish. Use a clean, dry or damp cloth.
- Ensure that all installation mounting surfaces are able to support the weight of the BackboxFS.
- Do not attempt to modify or repair the product. Contact your distributor or manufacturer if it is faulty or damaged in any way.

ENVIRONMENTAL:

Please be aware that whilst this product significantly reduces the rearward sound output of an AIW X Series loudspeaker some vibrational energy may still travel some considerable distance up, down and along the wall or ceiling structure. It is therefore recommended the product be fitted within acoustically insulated stud walls or ceilings where possible.

WARNING:

No attempt should be made to install this product within existing building structures unless you are certain that no electric cables, water pipes, gas pipes or supporting joists will be cut through.

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01

Packaging

CAUTION:
Take care when removing the BackboxFS from the carton.

The packaging for the BackboxFS has been carefully designed to protect the product during transit. Please retain it in the unlikely event you need to return the product to your dealer or manufacturer. Please recycle the packaging should you wish to dispose of it.

The BackboxFS outer carton is made up of 80% recycled single wall board.

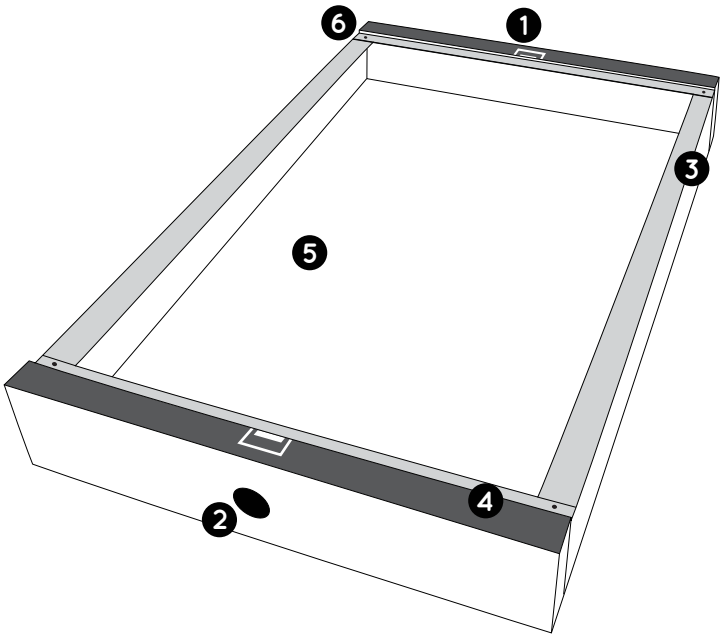
Introduction

Thank you for purchasing the Amina Technologies BackboxFS. This product has been designed to enhance the installation of our AIWX Series Invisible Loudspeakers by providing an optimised enclosure for them to operate in. The BackboxFS provides 17dB SPL reduction from 200Hz and above (-25dB at 1kHz) of an AIWX Series loudspeaker's rearward sound output into the wall or ceiling cavity.

The BackboxFS is relatively simple to install and this guide includes step by step instructions on the correct way to do this in order to align the AIWX speaker for plastering.

Overview

1. Fold out support tabs
2. Rubber grommet
3. Speaker mounting lip
4. Backbox mounting lip
5. Soundproofing layer
6. Speaker fixing holes

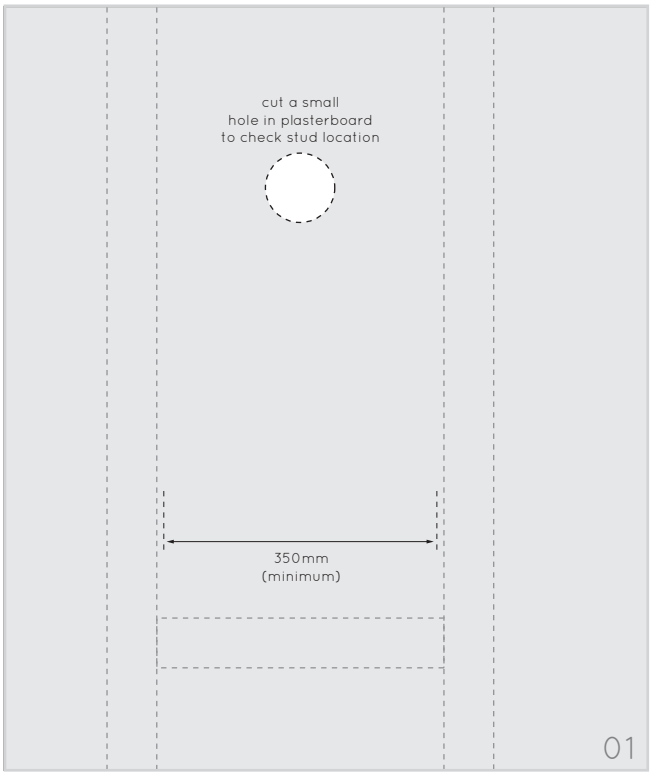


BackboxFS installation

01 Locate joist work

When you have chosen your speaker locations, before cutting a hole in the plasterboard it is important that you locate the position of the wall studs. Ensure the spacing between them is at least 350mm (13 3/4") for a portrait orientated speaker.

Important: If the spacing between joists is less than 350mm (13 3/4"), consider using the AIW3X/S200 loudspeaker which only requires a 200mm (7 7/8") wide cavity

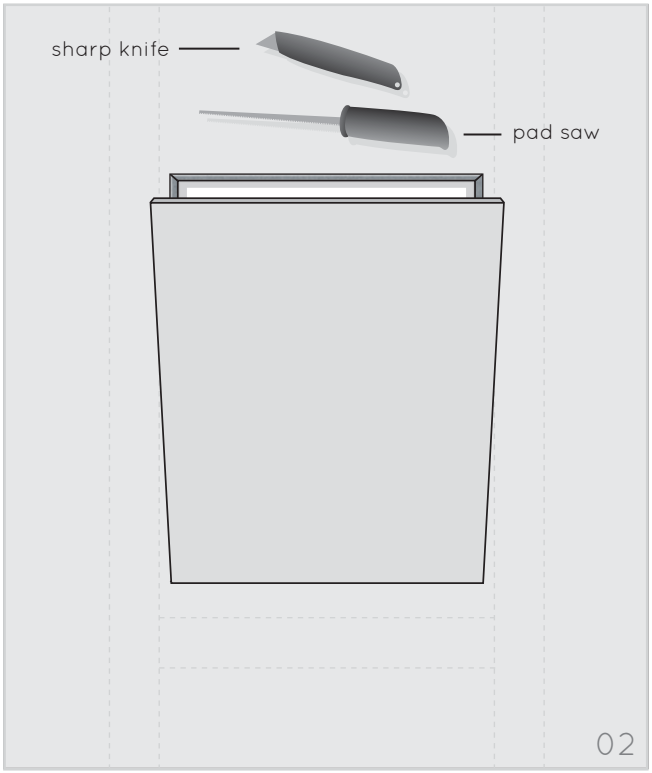


02 Create 455 x 350mm aperture

Using a sharp knife or pad saw, cut an aperture with dimensions 455mm x 350mm (18" x 14") in your plasterboard wall or ceiling. Ensure the aperture is created between supporting joists or stud work.

We strongly advise that joists are not cut to make space for the backbox. Any activity of this sort may well influence the structural integrity of your property.

Important: Double check the size of the aperture is 455mm x 350mm (18" x 14") as this is important further on into the installation process.



BackboxFS installation continued...

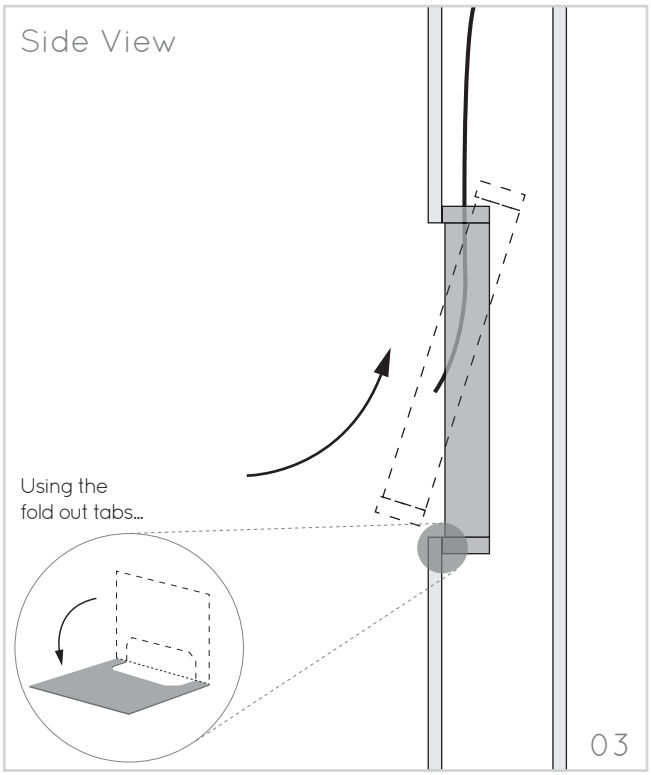
03 Locate cable and position backbox

Pull the speaker cable through the rubber grommet in the top side of the backbox FS and ensure speaker cables are pulled through with a manageable length available. Doing this will make it easier to connect the cable to the speaker later on in the installation process.

Position the BackboxFS within the aperture so as to rest it against the back side of the plasterboard.

Use the fold out tabs at either end of the backbox FS to help support it in position before securing it to the plasterboard.

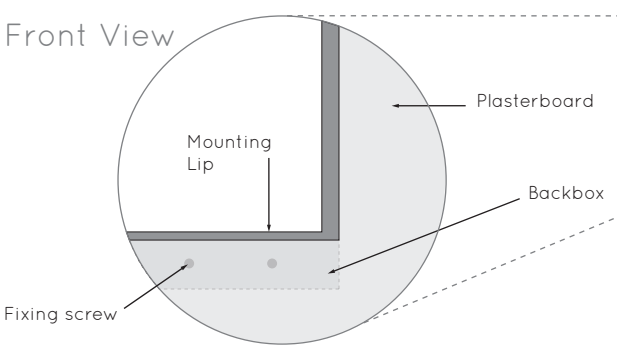
A 75mm/3" cavity depth is required to fit a BackboxFS or BackboxFSS.

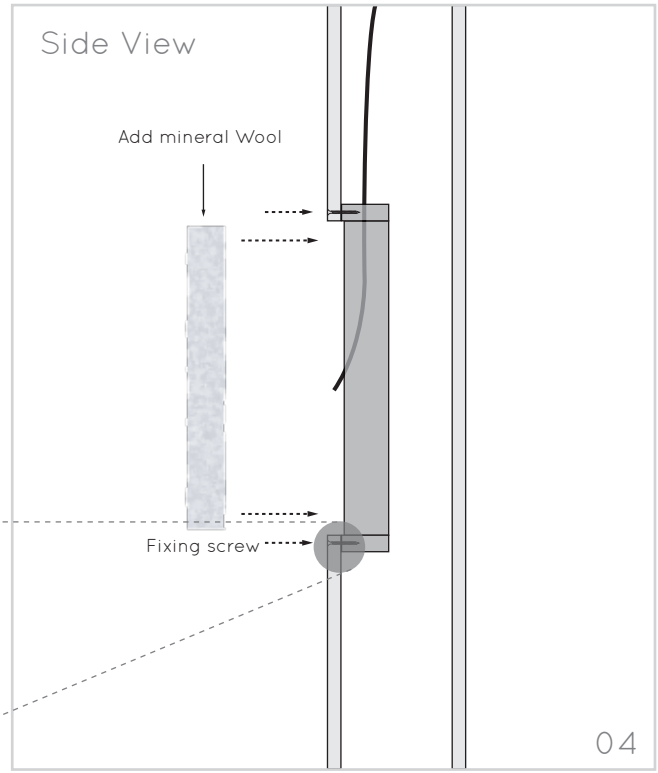


04 Fix BackboxFS and insert insulation

Using 8 drywall screws (4 at each end) fix the BackboxFS by screwing through the plasterboard and self tapping into the backbox mounting lip ❹ . When positioned correctly, the backbox's speaker mounting lip ❸ with soft foam surface should be visible along all four sides of the aperture.

It is recommended to add sound absorbing mineral wool inside the BackboxFS to further reduce sound transmission behind the speaker. (2" maximum thickness)





BackboxFS installation continued...

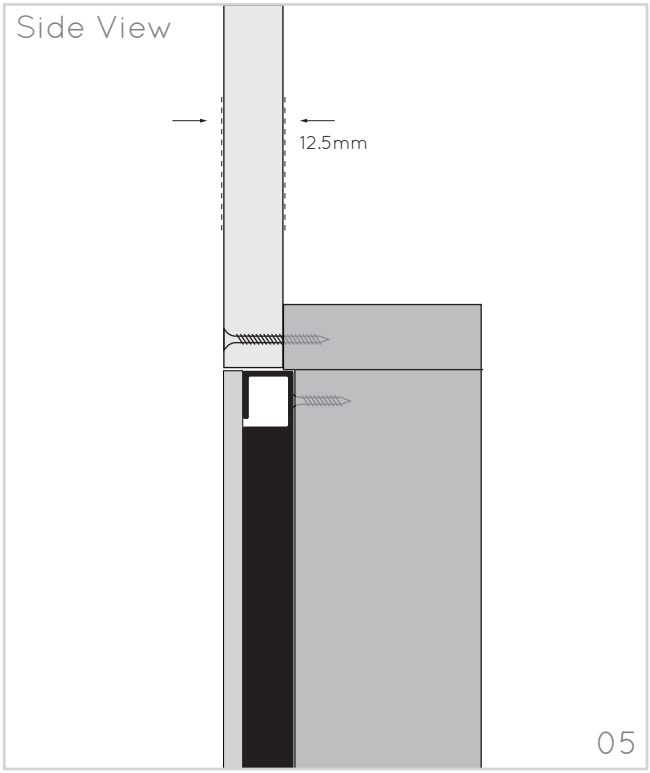
05 Fixing the speaker to the BackboxFS

Once the speaker has been electrically connected it can now be fixed to the BackboxFS.

With the speaker resting on the speaker mounting lip ❸ use drywall screws to secure the speaker onto the BackboxFS by self tapping into the speaker mounting lip ❸, through the speaker fixing holes ❻.
Ensure the speaker face is aligned correctly (see alignment section, pages 5 - 9) and that everything is firmly held in position. Shims may be necessary.

Amina backboxes (Backbox FS and FSS) are designed for 12.5mm (1/2") plasterboard. Shims can be supplied to adapt the backboxes for different plasterboard thicknesses. Contact your supplier when ordering.

For plasterboard *thicker* than 12.5mm (1/2") fit shims between speaker and speaker mounting lip ❸.
For plasterboard *thinner* than 12.5mm (1/2") fit shims between the back of the plasterboard and the backbox mounting lip ❹.



06 Testing

Speaker testing should be done before plastering. For information on speaker testing please refer to the AIWX installation guide (page 22 Section C)

07 Plastering

Please refer to the AIWX Series installation guide for details on how to plaster your loudspeaker after you have installed the BackboxFS and speaker.

The following section of this guide shows how to align the BackboxFS for the different plastering techniques that can be used.

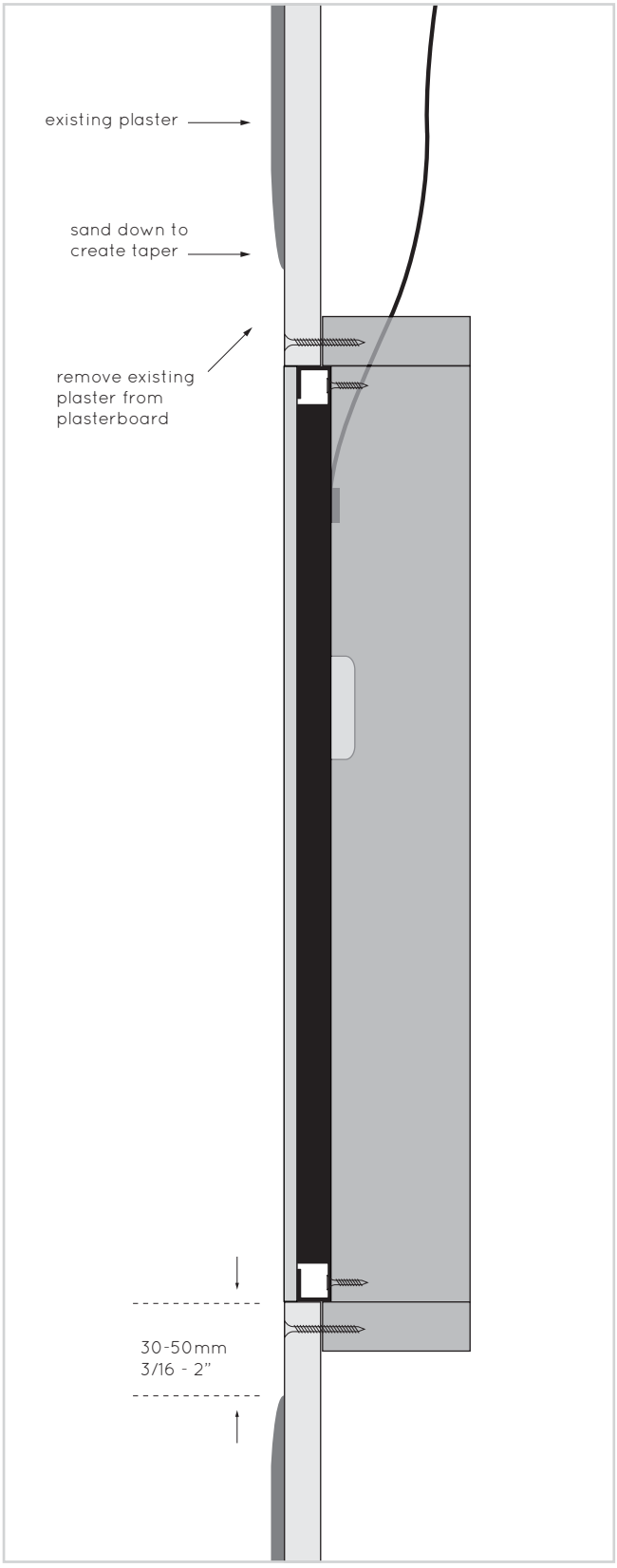
Retrofit / pre-skimmed plasterboard
Patch plastered finish

For walls / ceilings that have already been plastered.

Backbox alignment required for plastering

After removing a 30-50mm (3/16 - 2") wide section of existing plaster surrounding the cutout, the front face of the speaker should be flush with the paper face of the plasterboard if the BackboxFS has been fitted correctly.

This method positions the speaker to be patch plastered with a 2mm (5/64") skim across the speaker front, blended with the existing plaster on the plasterboard. Amina recommend British Gypsum Easi-fill® which allows a smooth accurate finish using fine sandpaper or a wet sponge.



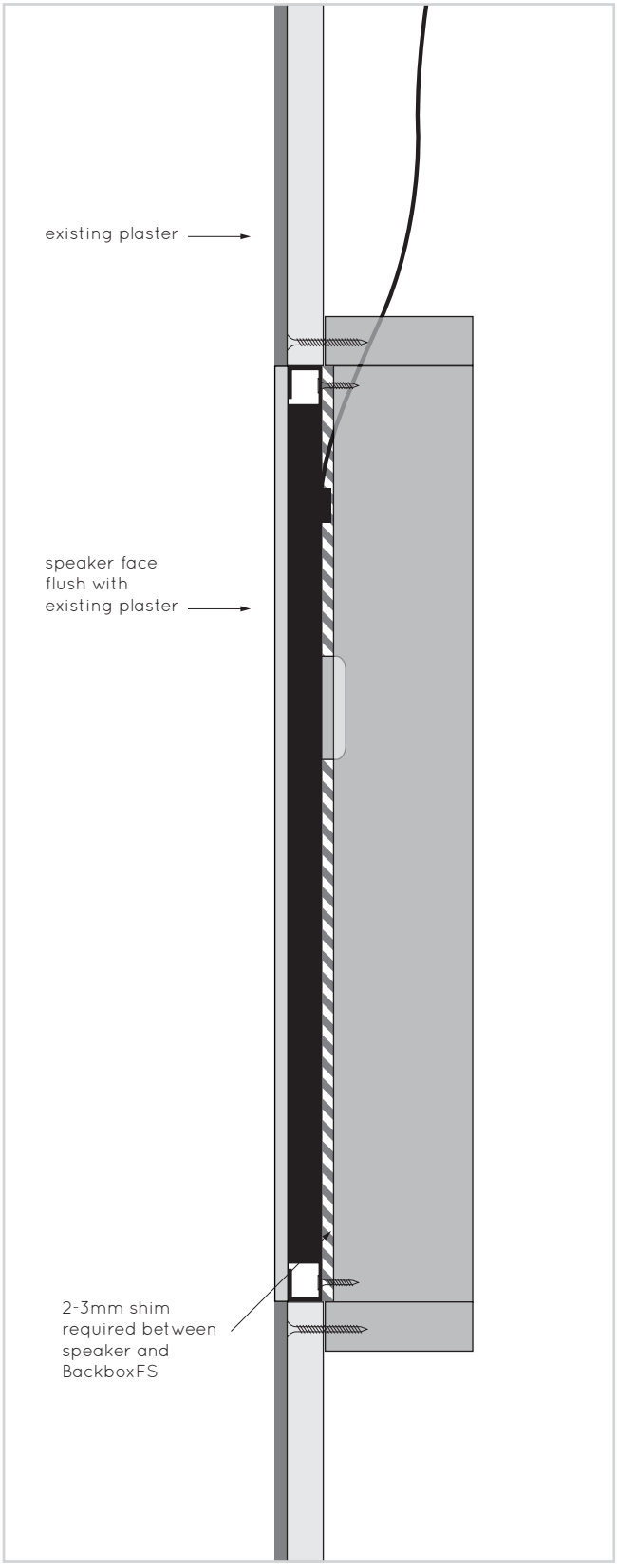
Retrofit / pre-skimmed plasterboard
Feathered skim finish

For walls / ceilings that have already been plastered.

Backbox alignment required for plastering

Using a 2-3mm shim set (contact your Amina supplier) between the back of the speaker and the speaker mounting lip ❸, the front face of the speaker should be flush with the front face of the existing painted/plastered wall/ceiling.

This method positions the speaker allowing a much larger area around it (approx. 1m^2 (39")) to be skimmed. This 2mm (5/64") thick skim is then feathered outward at the edges and blended into the existing wall/ceiling finish.



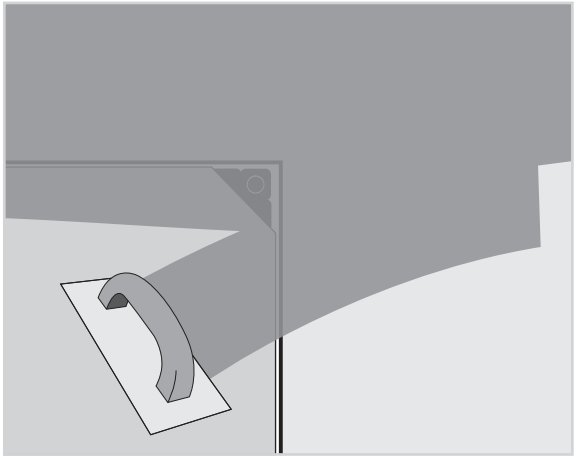
New build / new plasterboard
Full wet skim finish

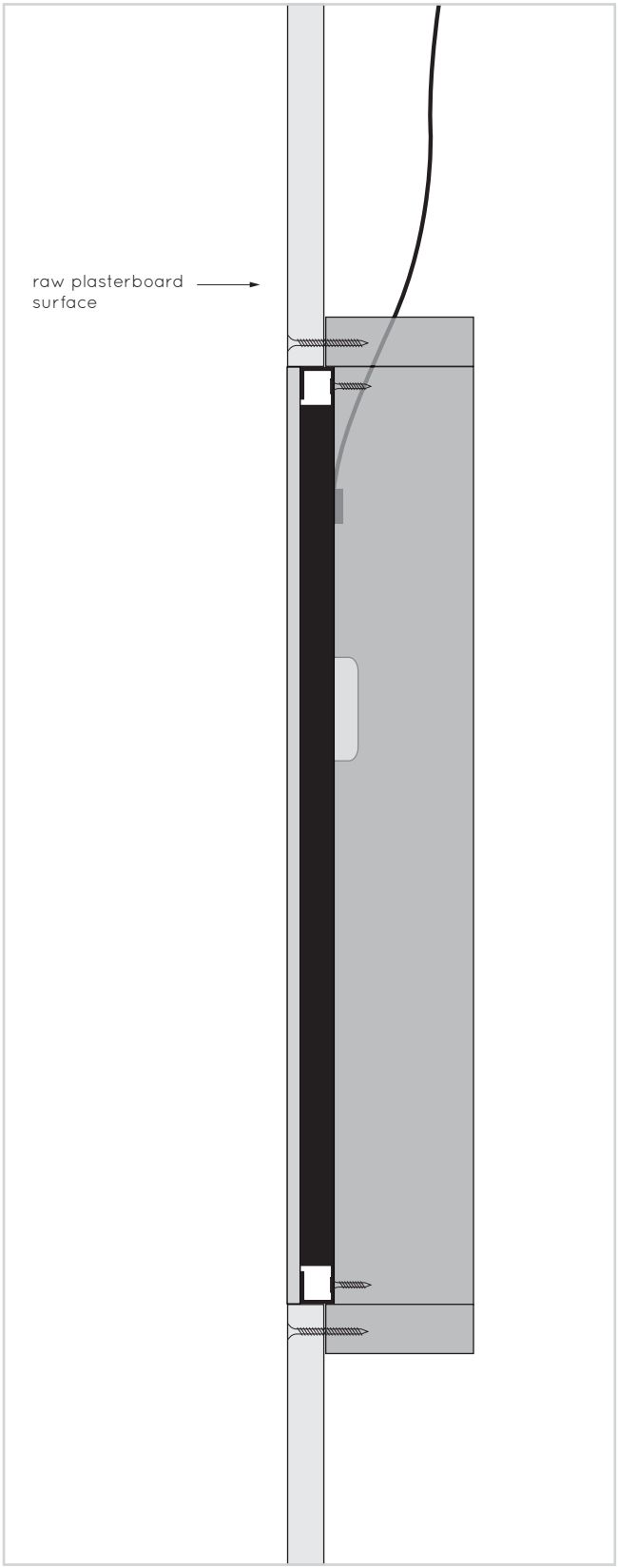
For new plasterboard walls / ceilings that have not yet been plastered.

Backbox alignment required for plastering

The front face of the speaker should be flush with the face of the new wall/ceiling if the BackboxFS has been correctly installed.

This method positions the speaker to be skim plastered over during the process of the entire wall/ceiling being plastered.



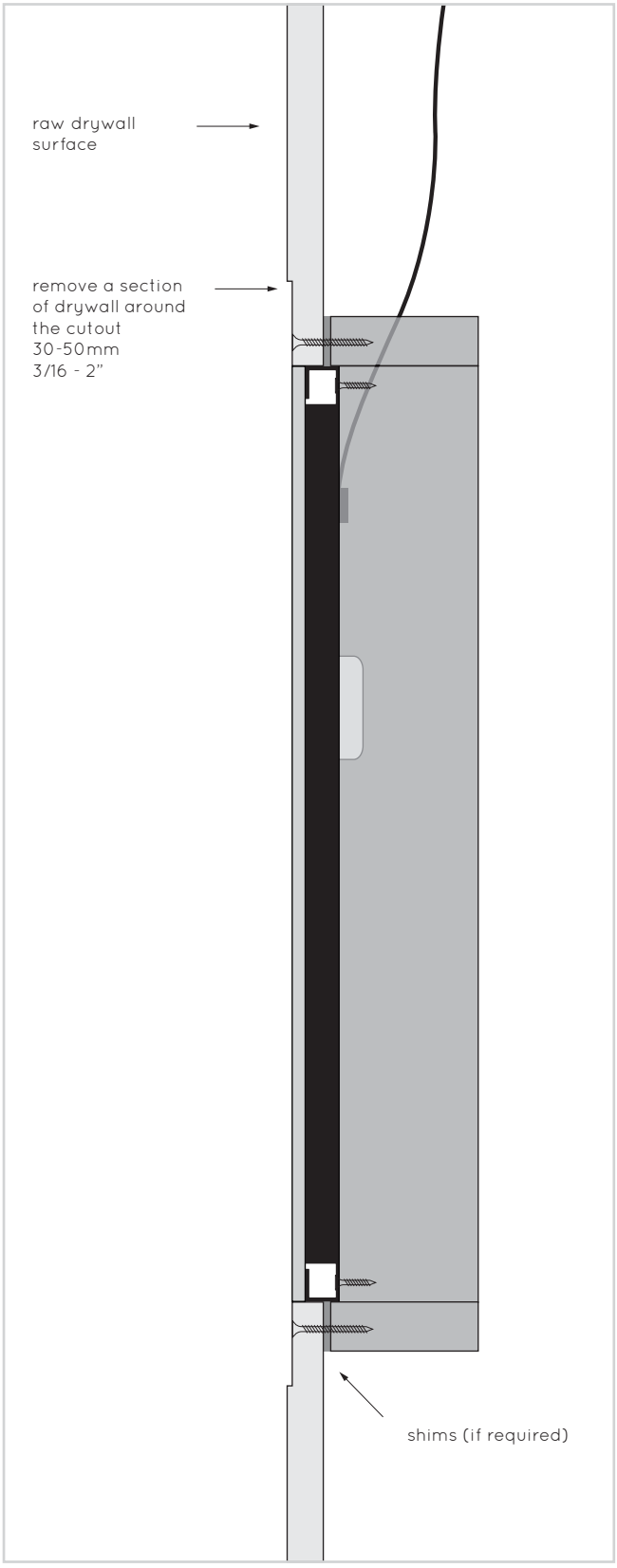


Retrofit / new drywall
Patch plaster finish

For new drywall walls / ceilings that will be taped and joined.
(North American construction)

Backbox alignment required for plastering

The front face of the speaker should be located 2mm (5/64") behind the face of the new wall/ceiling if the BackboxFS is correctly installed.



This method positions the speaker to be patch plastered with a 2mm (5/64") skim across the speaker front and blended with the drywall.
Amina recommend British Gypsum Easi-fill® which allows a smooth accurate finish using fine sandpaper or a wet sponge.

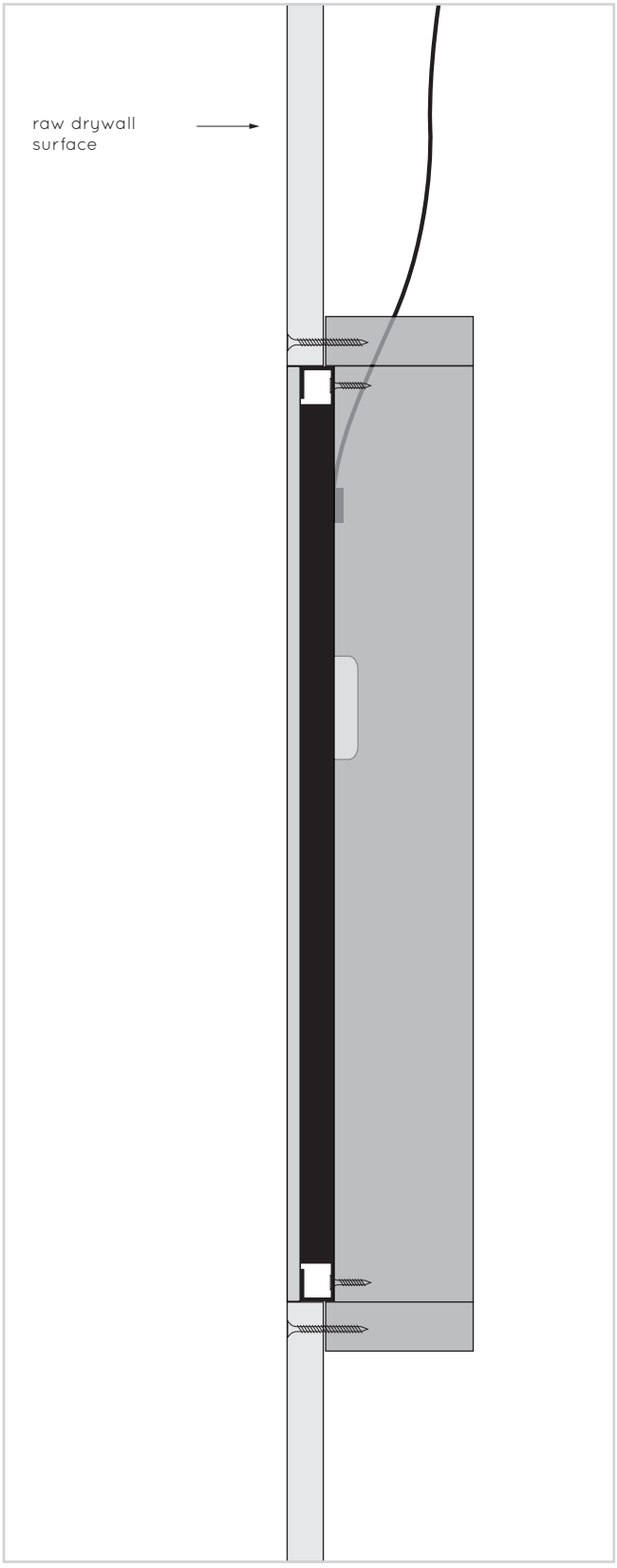
Retrofit / new drywall
Feathered skim finish

For new drywall walls / ceilings that will be taped and joined.
(North American construction)

Backbox alignment required for plastering

The front face of the speaker should be flush with the face of the new wall/ceiling if the BackboxFS is correctly installed.

This method positions the speaker for a large area (approx. 1m^2 (39")) to be skimmed over it. This 2mm (5/64") thick skim is then feathered outward at the edges and blended into the existing wall/ceiling finish.



Further details

Removal
In the unlikely event of a problem developing with the product, or you simply wish to remove the item to change its location, please refer to the following guidelines:

Locate the speaker by tapping the wall or ceiling listening for a hollow sound compared to the rest of the wall/ceiling. Then, with a sharp chisel or decorator's scraper, carefully chip into the plaster to expose a small area of the panel surface. To ensure you do not damage the panel, hold the tool at an acute angle to the wall or ceiling.
Now, holding the scraper almost parallel to the panel surface, work outwards towards the product's edge easing the plaster away from the panel. Do not worry if the panel surface receives marks or indented scratches during this process (it should not, however, have holes entering through to the unique honeycomb panel). Once the product is plastered back into its original or new location, the new skim of plaster will cover all these imperfections and the speakers performance will not be unduly affected.

Clear the surface plaster material from the surrounding plasterboard to expose all the joint tape and subsequently remove it. Use a narrow chisel or flat blade screwdriver to remove the plaster and expose the screws at each corner of the product and those fixing the BackboxFS to the plasterboard. Using a suitable screwdriver, remove the four screws holding the speaker and then ease it from the wall or ceiling and disconnect the speaker cable. Next, remove the eight screws holding the BackboxFS in place and carefully remove it taking care not to drop it down into the cavity if wall mounted.

If the product needs repairing, please return it to your supplier or Amina Technologies Ltd. Once repaired, the product can be refixed into position following appropriate installation steps detailed earlier within the manual.

Warranty information

Limited Warranty:

The Amina BackboxFS is designed to last for many years. Correctly installed in accordance with these instructions, Amina warranties the BackboxFS against defective materials and workmanship for a period of five years in commercial applications and ten years in residential applications.

At the end of the product's useful life it should be returned to your supplier, or directly to Amina for recycling. If you have any questions please contact Amina Technologies Ltd.

* Please refer to our full warranty statement for details, available on our websites, or alternatively contact us via email on any of the above addresses.

Important Note: This product does not comply to European Construction Products Directive EN 54-24 and therefore must not be used in European voice evacuation systems.

Copyright information

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Amina is a registered trademark of Amina Technologies Ltd

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